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# SCIENCE

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## THE AMERICAN COLLEGE AND LIFE<sup>1</sup>

It is in no wise due to my own choice and moving that I am called upon to take part in this discussion. Just because philosophy calls for so much reflection, I consider it a proper part of a philosophical student's business to keep himself relatively naïve, unreflective and directly practical regarding at least some important portion of his own life's business. Upon certain problems it is my duty to reflect, in as critical a fashion as I may. I do reflect about those problems with a good deal of persistence, and I discourse upon those topics at wearisome length. They are topics of logic, of metaphysics and of general ethical doctrine. In the rest of my life I try to stick to business without much reflection. Such naïveté need not mean, I hope, either carelessness or unfaithfulness. It may mean, and in my case I hope that it does mean, so far as that part of my vocation is concerned, practical absorption in tasks. Now part of my vocation is that of a teacher. And while, as I said, I reflect a great deal upon the metaphysical and other topics concerning which I have to teach, I have never been disposed to reflect much about the practical business of teaching itself. I teach as I can. When I observe that I teach ill, I try to mend my ways. I can not tell much about how I try to mend them. I can not formulate a theory of teaching. When I observe that a student

<sup>1</sup> An address given before the Section of Education at the Baltimore meeting of the American Association for the Advancement of Science.

is inattentive, I try to interest him. When he is wilful, I try to get past his wilfulness as I can. I do not know what, as a teacher, I accomplish. I simply try my best. And I suppose that, for me, with my limitations, such relatively unreflective efforts to do my best are most useful to me as a teacher. And similarly, as to the general conduct of a college, I avoid theories. I attend various faculty meetings, and have a natural and somewhat uncritical fondness for the wisdom of my administrative leaders and colleagues. But I do not understand college administration, especially under modern conditions. I have listened pretty patiently to some long and learned faculty debates upon the problem of college entrance examinations. I have never been able to comprehend the subject. I prefer to reflect upon such straightforward and solid problems as that of the absolute. I leave such airy topics as the reform of the secondary schools to those who know about them. There seem to be many such knowing persons. I hope that together they have wisdom enough to meet the issues of their time. But never, by my own choice, would I venture to take part in the counsels of the wise regarding the theory and the general conduct of what is called the American college. For I know that I am merely a servant of the college, who can do best by holding fast to my own work. Since, however, men much wiser upon this topic than I am have insisted upon my taking part in this debate, I offer my views simply as the personal impressions of a college teacher, who has tried for years to be faithful to his calling, but who has no general theories as to the college. I come here simply as *ein Thor*, who, if I have any sort of insight into my practical tasks as a teacher, or into the value of the American college for life, possess this insight merely as one who am

perhaps a very little *durch Liebe erleuchtet*. I am told that testimony is desired here, as well as comprehension. Upon these topics my comprehension is of the slightest. Let me merely offer my testimony.

I may begin the summary of my impressions by relieving you of the notion that I have any right to speak as a representative of a distinctively Harvard point of view. I have tried to serve Harvard as I could for more than a quarter of a century. And my personal love for Harvard and for my work there is indeed at the heart of whatever I can say. But I am a graduate of the University of California. My educational prejudices were first formed under the conditions of far western state university life, and were later modified by study at the Johns Hopkins University. I keep many of my early prejudices still. And they result in this impression, viz., that some of the most important problems of what your title calls the American college will have to be worked out under the conditions of the great state universities. The center of gravity of our future American academic life can not always, can not, I think, very long remain east of the Alleghenies. Through a perfectly natural and inevitable evolution, the state universities of the middle west and of the far west, supported as they are, and will be, by the vast resources of their own communities, and guided by constantly improving educational ideals, will within a generation or two occupy a very nearly central place in the academic life of our country. I do not imagine that the older eastern institutions will fail also to advance rapidly and effectively. But they will in many ways need to undertake functions more closely analogous than their present functions are to those of the state universities. That is, as institutions whose influence

will more and more be felt in the organization of the whole system of public education in their respective provinces, as trainers of our new coming foreign population to the duties of citizenship, as servants of the state, as centers of guidance, both for technical education and for research, the older eastern universities will, like the western state universities, undertake a variety of tasks which they now very unequally recognize and pursue. Hence, as I believe, when we think of the future of the "American college," we should remember that this future is bound up, inseparably, with the future of the American state universities, and with the future of institutions whose functions will be in more and more ways analogous to that of the state universities. It is, therefore, simply useless to try to think of something called "the college" as if its function could be sharply separated from that of very various grades and types, both of technical and of professional schools. I think that the usual disposition of many educational theorists to insist that, for the sake of a dictionary definition of the term college, and for the sake of some historical tradition, such a sharp separation of the functions of "the college" from the technical school on the one hand, and from those of the graduate professional school on the other hand, should be made where it does not at present maintain itself—I think, I say, that this usual disposition is misleading. Look at the state universities and see what the work of "the college" with them always has been. It is a work that in various parts of the same institution may involve training in agriculture, in mining, in classics, in political science, in philosophy, in music and in civil engineering. One may protest as one will that one misuses the term college when one talks of a college of agriculture, and that one ought instead to speak of a tech-

nical school of training in agriculture. One may raise as much as one pleases the question whether a liberal education, devised by some one who does not love agriculture, should first be required of students of agriculture, who should then only be allowed, as graduates, to undertake their more technical studies. One may insist as one chooses that agricultural schools, if they are to exist at all, should be separated from the institutions that undertake to educate their pupils in the sense of a higher cultivation. But whatever one thus does by way of formulation, of definition, and of criticism, the state universities will continue to show that the best thing you can do for an agricultural school is to make it an integral part of an academic institution wherein Greek and metaphysics and history and the science of government are also taught; while one of the best things that you can do for the young men who are to be trained in the humanities is to keep both them and their teachers in pretty close contact with the pupils and teachers who are engaged in technical studies. The history of more than one western state university has been the history of the gradual humanizing of a little group of technical schools. A college of agriculture, as it grows, adds to its resources, perhaps, a department of music, a "classical college" is joined to schools of engineering which have already been formed, and thus something is developed which is indeed a highly composite institution. Its functions include those of graduate and undergraduate, technical and professional schools, and also the functions of which we are talking when we speak of the American college. The interesting feature of such institutions is that our lines of division become more and more obviously artificial when applied to them. The function of "the college" in their case becomes intertwined with other func-

tions, technical, professional and scientific! Is such intertwining, is such overlapping and interlacing of functions unwholesome? I think not. I myself welcome the union of technical studies with those which involve a more general cultivation. Men grow so differently, mature at such unequal rates, are cultivated by such different sorts of work, and can use their general cultivation, if they have any, for such various technical purposes, that, for my part I suppose one of the notable functions of an academic institution to be the uniting rather than the further sundering of the various more or less learned activities of modern life, the humanizing of engineers, and the preparation of the young followers of the humanities for some practical service of mankind.

Whatever the functions of "the college" then, it is impossible to treat these functions so as sharply to sunder them from the functions of technical schools. We ought not to say to any one separate class of young men: You want cultivation. That is good. We will therefore give you four years of pure cultivation. Thereafter you shall be ready to undertake something else, which is not cultivation but is your life-work. There are indeed some men who are best trained in just this way. But there are also very various sorts of men in whose cases the most different kinds and degrees of union of technical with non-technical types of training form the best means of education. Our undergraduate instruction must reckon with these various sorts of men. We must offer to them various intermediate kinds of education. And we need to have these various sorts of men kept in social relation with one another as they mature. The fortunes of "the college" must not be sundered from those of the technical schools. And this is what the state universities have taught us.

Equally impossible it is to keep asunder, as some theorists wish to do, collegiate instruction and what is called graduate professional instruction. I have for years heard colleagues of mine protest against permitting instruction which they regarded as professional in its nature to count towards a college degree. I have never been able to get from these colleagues any general definition of what, in the modern world, constitutes the distinguishing mark of a professional study. Of course there are professions, notably law and medicine, which can draw their own sharp lines between their particular professional studies and all non-professional studies. These professions wisely begin their training at a definite point, preferably no doubt with college graduates. But then these particular professions are concerned with topics, and with a sort of technique, which can be begun only when the student has a fairly definable degree of maturity. You can not make a young boy a nurse, and you can not wisely begin to give him early clinical instruction. Fragments of legal lore, introduced into undergraduate instruction, tend, we are told, rather to hinder than to help the later work of the law school. So here sharp lines can be authoritatively drawn. But in modern life there are many professions, and, in case of some of these, the boy can already do what it will be almost necessary for the future professional man to have done as early as possible. I was once told by an old sea-captain that an essential part of his life's training was learned in his sailboat, in the harbor at home, when he was a boy, and that he therefore wholly doubted the power of even the best modern naval training school to make a trustworthy ship's officer out of anybody who had not begun to learn the sailor's trade in early boyhood. I need not say that my captain was not alone in this con-

viction, which is that of the old fashioned mariners generally. But what is true of sailors is in various degrees true of other callings. Good engineers can well be made by a training that begins in boyhood, and that certainly ought to include undergraduate training as well as graduate training. And yet I am sure that an engineer ought, amongst other things, to be as cultivated a man as he can be made, and so I am sure that, in his undergraduate days he ought to have an opportunity for various sorts of cultivation that you and I would agree in calling collegiate. Future teachers, future social workers and clergymen, coming civil servants or colonial officials, embryo scientific investigators of all sorts—all these need, during their undergraduate years, training such that nobody can rationally distinguish between that portion of this training which is professional in nature and that portion of it which is apt to add to their general cultivation. Is training in the use of good English a professional study? I know many workers in various professions—contributors, let us say to scientific journals—who would be much better men in their own profession, because decidedly clearer in their wits, in case they had been better trained as school boys and as undergraduates in the accurate use of plain English. Yet what study could be mentioned that is a more typical instance of a so-called culture-study?

I insist then that one can not in any general way distinguish between the educational offices of technical and professional studies on the one hand, and the studies productive of cultivation upon the other. I myself, for instance, ought to teach logic so as to make it professionally useful to future engineers and to future clergymen alike, and to any cultivated man as well, in case he can be induced to be for a while reflective. If I can not do so, that is my

defect as a teacher of logic. It is useless to condemn me to the vague task of simply so teaching logic as to exert a cultivating influence over people who have no trade and who have not yet chosen a profession. As a teacher of logic I ought to be required to appeal to anybody who chooses to try the value of my personal appeal to him, whether he is a professional student or a technician, a graduate or an undergraduate.

In a college then, we ought to offer the youth such learning and such training as may prove to be useful in fitting men of their age for the life that they are going to lead, in so far as that is indeed a life which involves intellectual training at all, and in so far as they are youth who are mentally and morally fit to be taught during those years of their life. The unfit, the stubbornly unwilling, the unworthy, we must reject or dismiss. But whosoever will may come, if only the secondary schools have made him fit for a grade of training which experience shows to be in general adapted to reasonably normal folk at his age. And when we get him we ought to make him work as hard as is good for him, and not a whit harder than is good for him, at whatever study will best fit him for his life, whether that proves to be a technical or a so-called professional study or not. Of course we must try to add to his technique general cultivation, of the richest sort that we can get him to assimilate. We can best succeed in that if we teachers keep together ourselves, and unite in one institution the work of very various sorts of scientific and of learned men. Hence, while we shall indeed differentiate more and more our professional and technical schools and modes of training, we college teachers do ill if we unnecessarily separate ourselves and our work from close touch with those of our colleagues whose tasks are more technical and professional than are our own. Only

by union with such teachers can we keep the college near to life.

As to our present condition, in the American college of to-day, I agree with our critics that many college boys do not now work hard enough. The remedy lies, of course, in giving such boys more good work to do, and in employing more instructors whose duty it should be to follow them up personally in their work. The remedy also lies in increasing the effectiveness of our systems of individual advice—in brief in individualizing our methods of dealing with the individual. The remedy does not lie in banishing the work of the investigators to separate institutions, nor in differentiating a colony of pedagogical neuters, who can not generate ideas, nor add to knowledge, but who, as one imagines, can therefore the better teach. We have enough of the barren and unproductive minds at present amongst our college teachers. We want more living and growing investigators than we have. And we want our productive investigators to do more undergraduate teaching than they do. There is a place in the college, of course, for the great teacher who can impart knowledge, but who can not add to it, if indeed his is not really an unproductive mind, but a mind that, like that of Socrates, the prince of teachers, produces indirectly, by acting as the midwife, and by delivering others of the ideas with which their own minds are pregnant. But every effort to separate even this singularly valuable class of teachers from their investigating and originating colleagues, or to keep the investigators as a class by themselves, in institutions to be called universities, and to be sundered from our present colleges—every such effort, I say, seems to me to be in the direction of regression, of pedantry, and if I may speak frankly, of obscurantism. We want teaching and investigation to become more and more what

they ought to be—one and inseparable. Some investigators indeed can wisely teach only advanced pupils. Let them confine themselves to such work. Some good college teachers add nothing notable to knowledge. We welcome them whenever they do sufficiently good work of their own kind to make them valuable for the college. Some professional training, by reason of its topic or of its grade, must keep itself well apart from more elementary instruction; let it then do so. But let us not be so terrified by mere names and definitions that we shall set off by itself, in unprofitable isolation from the college, that sort and grade of professional instruction which can also help to awaken and to discipline youth at the collegiate age. And above all let us not be so much the slaves of the mere name *college* as to undertake to draw a sharp line which, in modern life, has no longer a place—a sharp line between all sorts of undergraduate and all sorts of graduate instruction. Many of our graduates need cultivation, badly enough, as all of us know. Many of our undergraduates need pretty advanced studies to wake them up. Let such have them.

As for the unquestionable present evils of too little hard work and too much sport on the part of the college undergraduates of to-day, let us meet these evils in two ways:

1. In general, let us seek to assimilate college work more rather than less to that sort and grade of professional work which calls out a young man's energies just because he feels that in such work something is at stake that is, for him, personally momentous.

2. In detail, let us make the college boy work harder by giving him more work to do, by following him up more closely and individually, and to that end, let us employ more teachers whose work of instruc-

tion shall be individual and personal. Let us abate the evils of sport by fearlessly excluding the mob from our intercollegiate contests, and by rigidly limiting the number of those contests.

In any case, however, let us beware of those theorists who, in the name of what they call the American college, want to sunder afresh what the whole course of our modern American development has wisely tended to join, namely, teaching and investigation, the more technical training and the more general cultivation of our youth, as well as the graduate and the undergraduate types of study. I should abhor the name college if this mere name ever led us into such a backward course as some are now advocating.

Let me say, in conclusion, that, in agreement with Mr. Flexner, I myself believe that a large reform of our relations to the secondary schools, and especially an essential change in our method of college entrance requirements and examinations is called for by the present conditions. But over that whole topic, for my poor wits, the clouds of mystery still hang thick. I leave the matter, and all these now uttered prejudices of mine to the judgment of those who appear to think that they know.

JOSIAH ROYCE

#### AMERICAN COLLEGE EDUCATION AND LIFE<sup>1</sup>

THERE is evidently a feeling in the minds of the public that there is something the matter with our colleges. The more sensitive and alert educational authorities are likewise aware of certain defects, although they may not agree upon the causes. The more or less definite feeling is that college work on the one hand lacks intellectual seriousness, and on the other fails, somehow, to connect vitally with the

<sup>1</sup>An address given before the Section of Education at the Baltimore meeting of the American Association for the Advancement of Science.

present needs of society. Questions as to the length of the course, or the threatened partition of the college between secondary school on the one hand, and the professional schools, including the graduate school, on the other, are really subordinate to this broader question of seriousness and connection. If the college is really worth while we shall doubtless manage the external organization of our system so as to secure its continuance. If the conviction becomes general that it is a survival from the past rather than a useful institution for the present, the really vigorous and ambitious young men will pass it by, and the public will not care to maintain it for the benefit of those who wish merely to spend four pleasant years.

The two chief questions, I conceive, are the value of its intellectual ideals and methods, and the value of its corporate or social life at a certain period in the development of young men and women. I shall confine myself chiefly to the former, in the belief that the intellectual problem needs to be attacked first. The present paper aims to show (1) that the work of the colleges up to about twenty-five or thirty years ago fitted the social situation in both ideal and method; (2) that in the past three decades there has come to be a gap between theory and practise to which the colleges are only in part adjusted; and (3) that the solution is likely to lie through a reconstruction of the college ideal of liberal education under the influence of new vocational methods and ideals. In return we may hope for a gradual permeation of vocations and social institutions by the new spirit and method, which will complete the readjustment between college and life.

#### I. THE FORMER IDEAL AND METHOD OF COLLEGE AND OF LIFE

The intellectual ideal of the college has